

IN THE CLAIMS:

Set forth below in ascending order, with status identifiers, is a complete listing of all claims currently under examination. Changes to any amended claims are indicated by strikethrough and underlining. This listing also reflects any cancellation and/or addition of claims.

Claim 1 (currently amended)

A multiple laser treatment apparatus, comprising:

(a) ~~n~~ n lasers, wherein ~~said~~ n > 1 and each of said n lasers ~~simultaneously~~ delivers a laser treatment beam selected for a treatment, and wherein ~~each one of~~ said laser treatment beams ~~have comprises at least one~~ different laser beam ~~parameters~~parameter; and

(b) a mirror-based optical delivery device ~~means~~ to deliver said laser treatment beams in a combined treatment beam, wherein said combined treatment beam has a spot size that is less than 0.1 mm, and wherein said combined treatment beam is delivered at a substance ~~that at which~~ said substance undergoes said treatment.

Claim 2 (currently amended)

The apparatus as set forth in claim 1, wherein said laser treatment beams have at least one of beam parameters are different wavelengths, different fluences, different power levels, different energy levels, different temporal parameters, different geometrical parameters, different spot sizes, different linear delivery parameters ~~and/or~~ different three-dimensional delivery parameters.

Claim 3 (currently amended)

The apparatus as set forth in claim 12, wherein said laser treatment beams have different wavelengths ~~wavelength~~ is selected from a spectrum of wavelengths ranging from ultraviolet to far infrared.

Claims 4-5 (cancelled)

Claim 6 (currently amended)

The apparatus as set forth in claim 1, further comprising ~~an~~at least one optical component to select ~~a one or more~~ laser beam ~~parameter~~parameters of one ~~or more~~ of said laser treatment beams.

Claim 7 (currently amended)

The apparatus as set forth in claim 6, wherein said optical component is one of a beam profiler, a collimator, a spherical element, an a-spherical element and/or a parabolic element.

Claim 8 (currently amended)

The apparatus as set forth in claim 1, further comprising means ~~for controlling to control~~for controlling ~~each one of~~ said n lasers.

Claim 9 (currently amended)

The apparatus as set forth in claim 8, wherein said means ~~for controlling to control~~for controlling comprises a single control panel.

Claim 10 (currently amended)

The apparatus as set forth in claim 1, further comprising means ~~for adjusting to control~~for adjusting ~~one or more~~ laser beam ~~parameter~~parameters of ~~at least one~~ of said laser treatment beams.

Claim 11 (currently amended)

The apparatus as set forth in claim 1, wherein ~~one or more of~~ said n lasers comprise at least one of a gas laser, a liquid laser, a solid state laser, a semiconductor diode laser, a tunable laser ~~and/or~~ a ~~flashlamp~~flashlight laser.

Claim 12 (currently amended)

The apparatus as set forth in claim 1, further comprising ~~an~~at least one optical path to transmit said laser treatment beams, wherein said optical path is one of an optical fiber, an articulated arm ~~and/or~~ a waveguide.

Claims 13-15 (cancelled)

Claim 16 (currently amended)

The apparatus as set forth in claim ~~14~~3, wherein said optical delivery device comprises linear delivery means for scanning said combined treatment beam in a linear scanning pattern.

Claim 17 (currently amended)

The apparatus as set forth in claim ~~14~~3, wherein said optical delivery device comprises three-dimensional delivery means for scanning said combined treatment beam in a three-dimensional scanning pattern.

Claim 18 (currently amended)

The apparatus as set forth in claim 1, wherein said optical delivery device~~means to deliver~~ comprises a micromanipulator.

Claim 19 (currently amended)

The apparatus as set forth in claim 1, wherein said optical delivery device~~means to deliver~~ comprises endoscopic delivery means for delivering said combined treatment beam within said substance.

Claim 20 (currently amended)

The apparatus as set forth in claim 1, wherein said ~~means to deliver comprises an optical device wherein said optical~~ delivery device comprises:

(a) — ~~n optical components aligned on an optical path to receive said laser treatment beams from said n lasers, wherein said laser n_i corresponds to said optical component n_i and $i=1, \dots, n$, and wherein each of said n optical components directs and selectively combines one of said laser treatment beams of said n lasers along said optical path; and~~

(b) — ~~an optical delivery system connected to said optical path to deliver said combined treatment beam to said substance.~~

Claim 21 (currently amended)

The apparatus as set forth in claim 20, wherein ~~one or more of~~ said n optical components comprise at least one of a wavelength selective mirror, a beam splitter ~~and~~ a wavelength selective filter.

Claim 22 (currently amended)

The apparatus as set forth in claim 20, wherein said optical delivery device further comprises~~comprising~~ means for adjusting a position of one of~~to position~~ said n optical components with respect to~~in said optical path or away from~~ said optical path.

Claim 23 (currently amended)

The apparatus as set forth in claim 20, wherein said optical delivery device further comprises~~comprising~~ ~~position~~ means for selecting at least two~~to generate a subset of combinations of~~ said laser treatment beams to be included in said combined treatment beam.

Claim 24 (cancelled)

Claim 25 (currently amended)

The apparatus as set forth in claim 1, wherein said treatment is a medical treatment, and said laser treatment beams are medically useful treatment beams.

Claim 26 (currently amended)

The apparatus as set forth in claim 1, further comprising means for diagnosing said substance to determine said treatment.

Claim 27 (currently amended)

The apparatus as set forth in claim 26, wherein said ~~diagnosing~~ means for diagnosing comprises a diagnostic system, wherein said diagnostic system maps an area of said substance using fluorescent emission.

Claim 28 (original)

The apparatus as set forth in claim 1, wherein said apparatus is a handheld delivery apparatus.

Claim 29 (currently amended)

The apparatus as set forth in claim 28, wherein said handheld delivery apparatus is a portable and transferable miniature handheld delivery apparatus with dimensions no greater than 6" by 12" by 20" ~~or less~~.

Claim 30 (currently amended)

The apparatus as set forth in claim 1, further comprising a ~~wherein said apparatus operates on independent power source~~.

Claim 31 (currently amended)

A multiple laser treatment apparatus, comprising:

(a) n lasers, wherein $n > 1$ and each of said n lasers delivers a laser treatment beam, and wherein said laser treatment beams have different laser beam parameters;

(b) means for selecting at least ~~select two of said~~ more laser treatment beams selected for a treatment wherein each one of said laser treatment beams comprises at least one different laser beam parameter; and

(c) ~~(b)~~ means for ~~to~~ simultaneously delivering ~~deliver~~ said selected ones of said laser treatment beams in a combined laser treatment beam at a substance that ~~at which said substance~~ undergoes said treatment, wherein said combined treatment beam has a spot size that is less than 0.1 mm.

Claim 32 (currently amended)

The apparatus as set forth in claim 31, wherein said laser treatment beams have at least one of beam parameters are different wavelengths, different fluences, different power levels, different energy levels, different temporal parameters, different geometrical parameters, different spot sizes, different linear delivery parameters and ~~or~~ different three-dimensional delivery parameters.

Claim 33 (currently amended)

The apparatus as set forth in claim 31, wherein said means for selecting~~to select~~ comprises ~~at least one~~ optical component to select ~~one or more of said~~ laser beam ~~parameter~~parameters of one ~~or more of~~ said laser treatment beams.

Claim 34 (currently amended)

The apparatus as set forth in claim 31, wherein said means for selecting~~to select~~ comprises means for adjusting~~to control~~ said laser beam ~~parameter~~parameters of one of said laser treatment beams.

Claim 35 (currently amended)

The apparatus as set forth in claim 31, wherein said means for delivering~~to deliver~~ comprises a mirror-based optical delivery ~~device~~system ~~to control said combined treatment beam~~.

Claims 36-37 (cancelled)

Claim 38 (currently amended)

The apparatus as set forth in claim 35, wherein said optical delivery device comprises linear delivery means for scanning said combined treatment beam in a linear scanning pattern.

Claim 39 (currently amended)

The apparatus as set forth in claim 35, wherein said optical delivery device comprises three-dimensional delivery means for scanning said combined treatment beam in a three-dimensional scanning pattern.

Claim 40 (currently amended)

The apparatus as set forth in claim 31, wherein said means for delivering~~to deliver~~ comprises a micromanipulator.

Claim 41 (currently amended)

The apparatus as set forth in claim 31, wherein said means ~~for delivering to deliver~~ comprises endoscopic delivery means for delivering said combined treatment beam within said substance.

Claim 42 (cancelled)

Claim 43 (currently amended)

The apparatus as set forth in claim 31, further comprising means for diagnosing said substance to determine said treatment.

Claim 44 (currently amended)

The apparatus as set forth in claim 43, wherein said ~~diagnosing~~ means for diagnosing comprises a diagnostic system, wherein said diagnostic system maps an area of said substance using fluorescent emission.

Claim 45 (currently amended)

A method for ~~simultaneously delivering a combined laser treatment beam~~, comprising the steps of:

(a) selecting at least two ~~or more~~ laser treatment beams ~~selected for a treatment~~, wherein ~~each one of~~ said laser treatment beams ~~have~~ comprises at least one different laser beam ~~parameters~~ parameter; and

(b) simultaneously delivering said laser treatment beams in a combined laser treatment beam at a substance ~~that at which said substance~~ undergoes said treatment, wherein said combined treatment beam has a spot size that is less than 0.1 mm.

Claim 46 (currently amended)

The method as set forth in claim 45, wherein said laser treatment beams have at least one of beam parameters are different wavelengths, different fluences, different power levels, different energy levels, different temporal parameters, different geometrical parameters, different spot sizes, different linear delivery parameters ~~and/or~~ different three-dimensional delivery parameters.

Claim 47 (currently amended)

The method as set forth in claim 45, wherein ~~said step of selecting~~ said laser treatment beams comprises ~~the step of providing~~ at least one optical component to select ~~one or more of~~ said laser beam parameter ~~parameters~~ of one ~~or more of~~ said laser treatment beams.

Claim 48 (currently amended)

The method as set forth in claim 45, wherein ~~said step of selecting~~ said laser treatment beams comprises adjusting ~~the step of controlling~~ said laser beam parameter ~~parameters~~ of one of said laser treatment beams.

Claim 49 (currently amended)

The method as set forth in claim 45, wherein ~~said step of simultaneously delivering~~ said laser treatment beams comprises ~~the step of providing~~ a mirror-based optical delivery ~~device~~ system to ~~deliver~~ control said combined treatment beam.

Claim 50 (currently amended)

The method as set forth in claim 49, wherein said optical delivery device comprises linear delivery means for scanning said combined treatment beam in a linear scanning pattern.

Claim 51 (currently amended)

The method as set forth in claim 49, wherein said optical delivery device comprises three-dimensional delivery means for scanning said combined treatment beam in a three-dimensional scanning pattern.

Claim 52 (currently amended)

The method as set forth in claim 45, wherein ~~said step of simultaneously delivering~~ said laser treatment beams comprises ~~the step of providing~~ a micromanipulator to deliver said combined treatment beam.

Claim 53 (currently amended)

The method as set forth in claim 45, wherein ~~said step of simultaneously delivering said laser treatment beams~~ comprises ~~the step of providing endoscopic delivery means~~ for delivering said combined treatment beam within said substance.

Claim 54 (cancelled)

Claim 55 (currently amended)

The method as set forth in claim 45, further comprising ~~the step of providing means for~~ diagnosing said substance to determine said treatment.

Claim 56 (currently amended)

The method as set forth in claim 55, wherein said ~~diagnosing~~ means for diagnosing comprises a diagnostic system, wherein said diagnostic system maps an area of said substance using fluorescent emission.

Claim 57 (currently amended)

A computer-readable medium~~computer program to manage and control a simultaneous delivery of multiple laser treatment beams to a substance,~~ comprising:

- (a) instructions~~means~~ for selecting a treatment plan, wherein said treatment plan comprises at least two or more laser treatment beams ~~having wherein each one of said laser treatment beams comprises at least one different laser beam parameters~~parameter; and
- (b) instructions~~means~~ for applying said treatment plan to a~~said~~ substance.

Claim 58 (currently amended)

The computer-readable medium~~computer program~~ as set forth in claim 57, wherein said instructions~~means~~ for selecting said treatment plan ~~comprise instructions~~comprises means for recommending said treatment plan.

Claim 59 (currently amended)

The computer-readable medium~~computer program~~ as set forth in claim 57, wherein said instructions~~means~~ for selecting said treatment plan ~~comprise instructions for selecting said treatment plan from~~~~comprises~~ a database of treatment plans.

Claim 60 (currently amended)

The computer-readable medium~~computer program~~ as set forth in claim 57, wherein said instructions~~means~~ for selecting said treatment plan ~~comprise instructions~~~~comprises means~~ for comparing said treatment plan with a previous treatment plan.

Claim 61 (currently amended)

The computer-readable medium~~computer program~~ as set forth in claim 57, wherein said instructions for selecting said treatment plan ~~comprise instructions for selecting said treatment plan based on entered~~~~further comprising means for entering~~ data.

Claim 62 (currently amended)

The computer-readable medium~~computer program~~ as set forth in claim 61, wherein said entered data ~~comprises at least one of patient data, treatment plan data, or complaint data and~~ disease data.

Claim 63 (currently amended)

The computer-readable medium~~computer program~~ as set forth in claim 57, further comprising instructions~~means~~ for verifying said treatment plan.

Claim 64 (currently amended)

The computer-readable medium~~computer program~~ as set forth in claim 57, further comprising instructions for communicating information with a~~communication means to communicate information between said computer program and one or more remote station~~~~stations~~.

Claim 65 (currently amended)

The computer-readable medium as set forth in claim 57, further comprising a database of a plurality of laser treatment plans, wherein said database of treatment plans comprises two or more laser treatment beams are delivered simultaneously to a substance, comprising:

- (a) asaid plurality of treatment plans; and
- (b) said one or more laser beam parameters for each one of said plurality of treatment plans,

wherein said instructions for selecting said treatment plan comprise instructions for selecting said treatment plan from said database of treatment plans each one of said laser treatment beams comprises at least one different laser beam parameter.

Claim 66 (currently amended)

The computer-readable mediumdatabase as set forth in claim 65, wherein said plurality of treatment plans are one of medical treatment plans, chemical treatment plans, biochemical treatment plans, bioengineering treatment plans and physical treatment plans.

Claim 67 (currently amended)

The computer-readable mediumdatabase as set forth in claim 65, wherein said database of treatment plans further comprises~~comprising~~ substance-related information.

Claim 68 (currently amended)

The computer-readable mediumdatabase as set forth in claim 65, wherein said database of treatment plans further comprises~~comprising~~ patient-related information.

Claim 69 (New)

The apparatus as set forth in claim 1, wherein said optical delivery device comprises a first mirror, a second mirror, and means for adjusting a position of said first mirror with respect to said second mirror.

Claim 70 (New)

The apparatus as set forth in claim 35, wherein said optical delivery device comprises a first mirror, a second mirror, and means for adjusting a position of said first mirror with respect to said second mirror.